



① **Manuale d'uso**

② **User manual**

→ **LEGGI E CONSERVA
QUESTE ISTRUZIONI** ←
**READ AND SAVE
THESE INSTRUCTIONS**

Warning!



L'installazione del prodotto deve obbligatoriamente comprendere la connessione di messa a terra, usando l'apposito morsetto giallo-verde in morsettiera. Non utilizzare il neutro come connessione a terra.

The product must be installed with the earthconnected, using the special yellow-green terminal on the terminal block. Do not use the neutral for the earth connection.

Le produit doit être installé avec la connexion terre branchée, en utilisant la signalisation et les bornes spécifiques (jaune/vert) à la mise à la terre. Ne pas utiliser le neutre comme mise à la terre.

Das Produkt muss geerdet werden. Verwenden Sie hierfür den gelb-grün Anschluss an der Klemmleiste. Verwenden Sie nicht den Null-Leiter für die Erdung.

La instalación del producto debe obligatoriamente incluir la conexión de la toma de tierra, utilizando el borne amarillo/verde del regletero. No utilizar el neutro como conexión a tierra.



IMPORTANT WARNINGS

BEFORE INSTALLING OR HANDLING THE APPLIANCE PLEASE CAREFULLY READ AND FOLLOW THE INSTRUCTIONS AND SAFETY STANDARDS DESCRIBED IN THIS MANUAL AND ILLUSTRATED BY THE LABELS ON THE MACHINE.

This humidifier produces non-pressurised steam by means of a heat exchanger powered by a gas burner immersed in the water contained in the boiler. The steam produced is used to humidify environments or industrial processes, using special distributors.

The quality of the water used affects the process of evaporation, and as a result the appliance may be supplied with untreated water, **as long as this is drinkable, demineralised (see Characteristics of the supply water)**. The evaporated water is automatically replaced using a filling valve.

This appliance has been designed exclusively to directly humidify rooms or ducts, using a distribution system, as long as the installation, use and maintenance operations are carried out according to the instructions contained in this manual and on the labels applied internally and externally.

The conditions of the environment, the fuel and the power supply voltage must comply with the specified values.

All other uses and modifications made to the device that are not authorised by the manufacturer are considered incorrect.

Liability for injury or damage caused by the incorrect use of the device lies exclusively with the user.

Please note that the machine is connected to the gas mains, contains powered electrical devices and hot surfaces.

All service and/or maintenance operations must be performed by specialist and qualified personnel who are aware of the necessary precautions and are capable of performing the operations correctly and in accordance with the safety standards and legislation in force, with specific reference to:

1. Italian law 1083/71: "Safety standards relating to the use of gaseous fuel";
2. Italian Law no.46/90: "Safety standards relating to systems in buildings";
3. Presidential Decree no. 447, December 6, 1991: "Regulations to law no. 46, dated March 5, 1990, on safety relating to systems in buildings";
4. Italian Law 10/91: "Regulations to the national plan for energy savings and the development of renewable sources of energy".

Disconnect the machine from the mains power supply before accessing any internal parts.

The local safety standards in force must be applied in all cases.



Disposal of the parts of the humidifier: The humidifier is made up of metallic and plastic parts.

In reference to European Community directive 2002/96/EC issued on 27 January 2003 and the related national legislation, please note that:

1. WEEE cannot be disposed of as municipal waste and such waste must be collected and disposed of separately;
2. the public or private waste collection systems defined by local legislation must be used. In addition, the equipment can be returned to the distributor at the end of its working life when buying new equipment.
3. the equipment may contain hazardous substances: the improper use or incorrect disposal of such may have negative effects on human health and on the environment;
4. the symbol (crossed-out wheeled bin) shown on the product or on the packaging and on the instruction sheet indicates that the equipment has been introduced onto the market after 13 August 2005 and that it must be disposed of separately;
5. in the event of illegal disposal of electrical and electronic waste, the penalties are specified by local waste disposal legislation.

Warranty on materials: 2 years (from the date of production, excluding the consumable parts, such as the cylinder).

Certification: the quality and safety of CAREL products are guaranteed by CAREL's ISO 9001 certified design and production system, as well as the TÜV,  and ETL marks.

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1. SPARE PARTS FOR THE CABINET

How to identify the spare parts:

1. identify the spare part in the following drawings and read the reference number;
2. Identify the spare part code in the spare parts list from the reference number.

Important: the spare parts list for the pump is divided into two sub-lists: one for the standard version and one for the stainless steel version.



Contact your nearest CAREL representative for any components not listed in the following chapters.

1.1 Spare parts for the pump inlet line

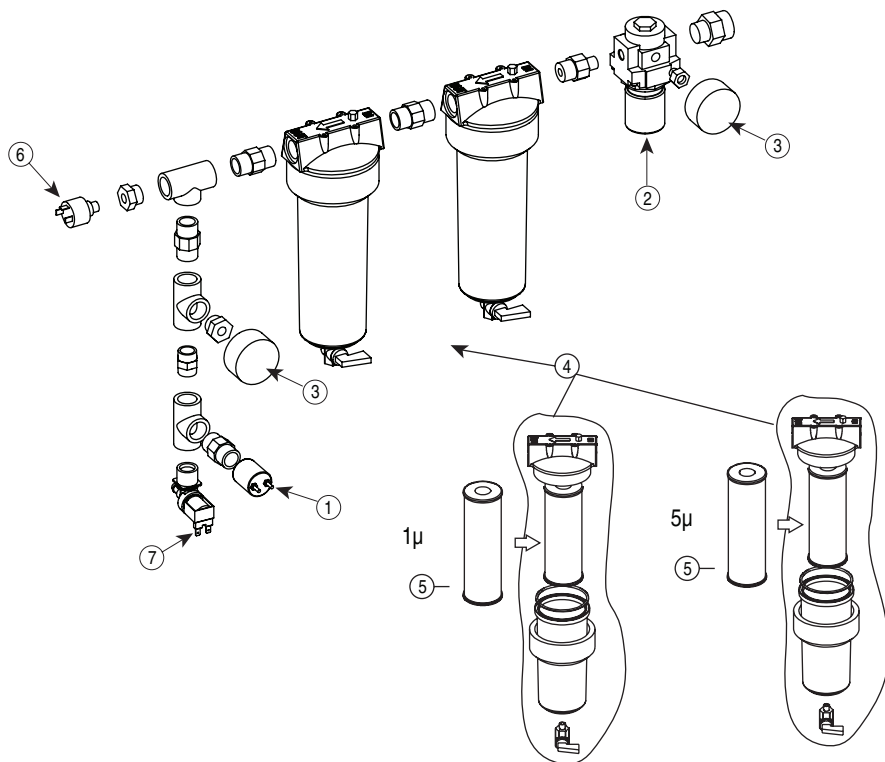


Fig. 1.a

1.2 Spare parts for the motor and pump

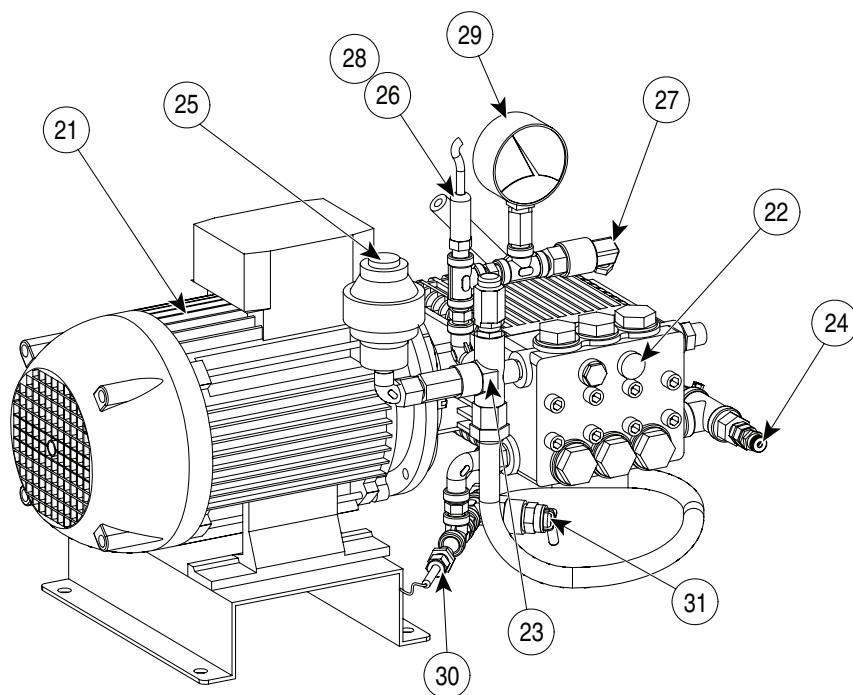


Fig. 1.b

1.3 Spare parts for the electrical panel

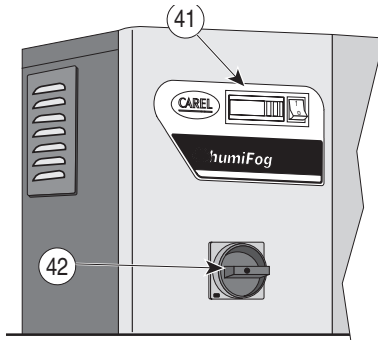


Fig. 1.c

Version "HD1"

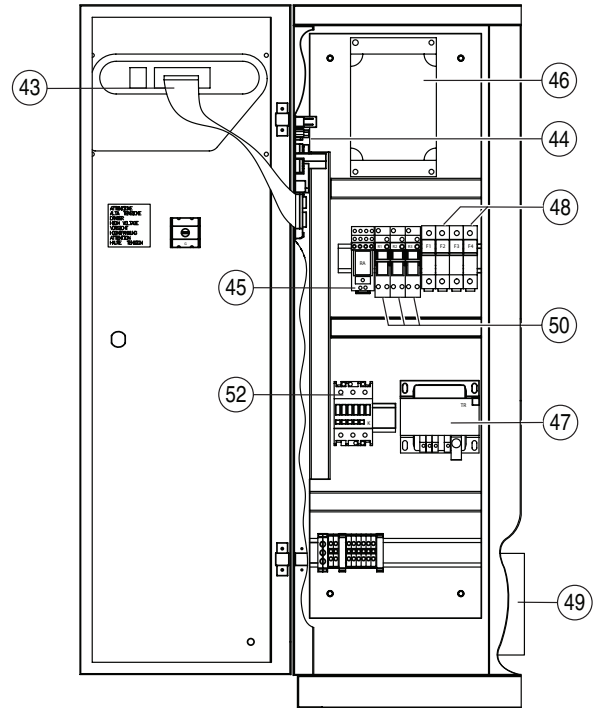


Fig. 1.d

Version "HD2"

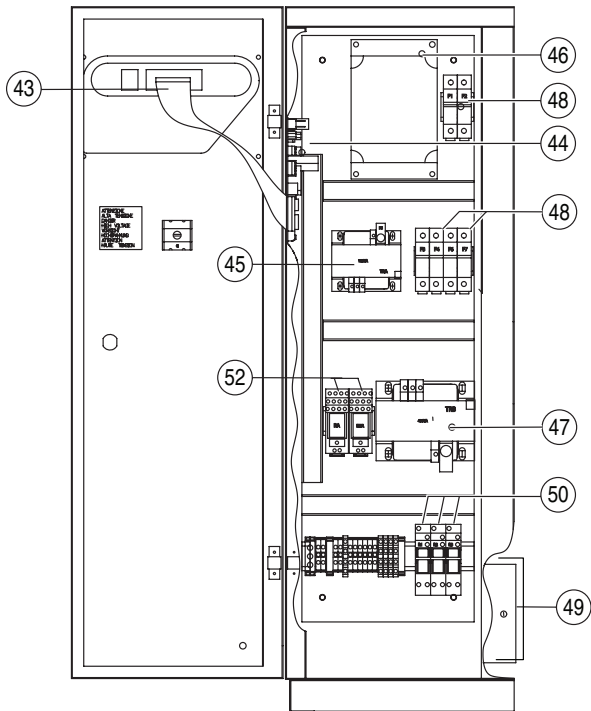


Fig. 1.e

Version "SL"

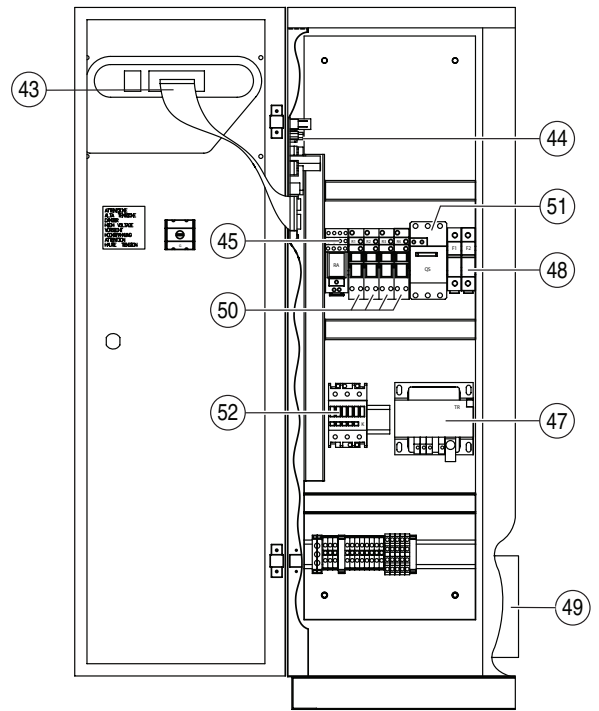


Fig. 1.f

1.4 Service spare parts

Water filter kit



Fig. 1.f

Bottle of oil for the pump



Fig. 1.g

Liquid Teflon



Fig. 1.h

Valve kit for the pump

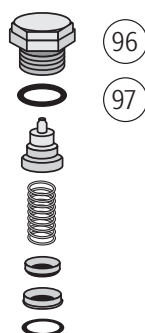


Fig. 1.i

Gasket kit for the pump

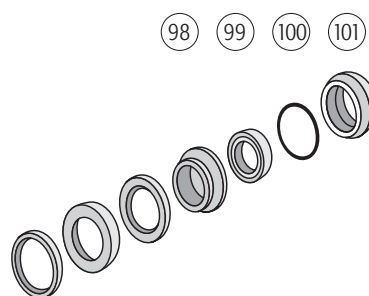


Fig. 1.j

1.5 Spare parts list

1.5.1 Spare parts for the pumps in versions "HD2X0 and "SLXX0"

List of the water circuit and mechanical parts relating to the standard version of the pump, with brass and stainless steel parts.

ref.	description	UA060...UA180	UA250...350	UA500	see Fig. no.	notes
1	Conductivity meter 0-5000 µS/cm		13C153A005		1.a	
2	Inlet press. reg. 0-10Bar		1309834AXX			
3	Inlet pressure gauge		1309717AXX			
4	Water filter case		1309500AXX			
5	Water filter kit (1µ + 5µ)		UAKFW0000			
6	Water inlet LP switch		1309503AXX			
7	Fill solenoid valve		KITVC00100		1.b	
21	Motor		Contact CAREL			
22	Pump		Contact CAREL			
23	Recirculation valve		Contact CAREL			
24	Pressure-relief valve 3-7Bar		Contact CAREL			
25	AISI 316 pump damper (optional)		1309513AXX			
26	Pressure probe		1309510AXX			"HD" versions only
27	Max. pressure switch 90bar		1309517AXX			
28	Min. pressure switch 15bar		1309517AXX			"SL" versions only
29	High pressure gauge 100bar		1309508AXX			
30	NTC water temp. probe IP68		NTC030WP00			
31	Stainless steel thermal valve 55°C		1309549AXX			

Tab. 1.a

1.5.2 Spare parts for the pumps in the stainless steel versions "HD2X1" and "SLXX1" List of the water circuit and mechanical parts relating to the stainless steel pump, with all the parts in contact with the water made from stainless steel.

ref.	description	UA060...UA216	UA250...420	UA500...600	see Fig. no.	notes
1	Conductivity meter 0-5000 µS/cm		I3C153A005		1.a	
2	Inlet press. reg. 0-10 bar	I309844AXX	I309845AXX	I309846AXX		
3	Inlet pressure gauge		I309720AXX			
4	Water filter case		I309500AXX			
5	Water filter kit (1µ + 5µ)		UAKFW0000			
6	Water inlet LP switch		I309654AXX			
7	Fill solenoid valve		KITVC00100			
21	Motor		Contact CAREL		1.b	
22	Pump		Contact CAREL			
23	Recirculation valve		Contact CAREL			
24	Pressure-relief valve 3-7 bar		Contact CAREL			
25	Pump damper (optional)		I309513AXX			
26	Pressure probe		I309510AXX			"HD" versions only
27	Max. pressure switch 90 bar		I309517AXX			
28	Min. pressure switch 15 bar		I309517AXX			"SL" versions only
29	High pressure gauge 100 bar		I309508AXX			
30	NTC water temp. probe IP68		NTC030WP00			
31	Stainless steel thermal valve 55 °C		I309551AXX			

Tab. 1.b

1.5.3 Electrical spare parts

For versions "HD2XX"

ref.	description	UA060...UA180	UA250...UA300	UA500	replacement: see ...
41	Controller with interface		See tab. 1.f		26.c
42	Main switch		UAKINT0000		26.c
43	Flat cable		59C486A003		26.d
44	I/O board		URI0000000		26.d
45	Relays A and RNA		0100711AXX		26.d
46	VFD		Contact CAREL		26.d
48	Fuse carrier		0606192AXX		26.d
49	Fan		I312545AXX		26.d
50	Rack valve relays		0102001AXX		26.d
53	Transformer A, 100 VA		09C565A001		26.d
54	Transformer A, 100 VA		0907694AXX		26.d
	VFD motor fuse (F1+ F2)	0605324AXX	0605326AXX	0605327AXX	26.d
	Fuse for transformer A (F3 + F4)		0605319AXX		26.d
	Fuse for transformer B (F6+F7)		0605321ALG		26.d

Tab. 1.c

For versions "HD1XX"

ref.	description	UA072...UA216	UA300...420	UA600	see Fig. no.	notes
41	Controller with interface		See Table 1.f		1.d	
42	Main switch		UAKINT0000			
43	Flat cable		59C486A003			
44	I/O board		URI0000000			
45	Start relay		0100711AXX			
46	VFD		Contact CAREL			
47	Transformer		0907612AXX			
48	Fuse carrier		0606192AXX			
49	Fan		I312545AXX			
50	Rack valve relays		0102001AXX			
53	Transformer, 100 VA	-	-	0203000AXX		
	VFD motor fuse (F1+F2)	0605324AXX	0605326AXX	0605327AXX		
	Transformer fuse (F3+F4)		0605320ALG			

Tab. 1.d

For versions "SLXXX"

ref.	description	UA060...UA180	UA250...350	UA500	see Fig. no.	notes
41	Controller with interface		See Table 1.f		1.e	
42	Main switch		UAKINT3000			
43	Flat cable		59C486A003			
44	I/O board		URI0000000			
45	Start relay		0100711AXX			
47	Transformer		0907612AXX			
48	Fuse carrier		0606192AXX			
49	Fan		1312545AXX			
50	NC/NO valve relays for distribution in the room		0102001AXX			
51	Motor protector	0402004AXX	0402005AXX	0402005AXX		
52	Contactors		0203000AXX			
	Transformer fuse (F3+F4)		0605320ALG			

Tab. 1.e

humiFog controllers

ref.	description	code
41	Controller with interface/display for all humiFog models, not configured	UAH0010000*
41	Controller with interface configured for UA060HD2XX	UAH6010000
41	Controller with interface configured for UA120HD2XX	UAHA210000
41	Controller with interface configured for UA180HD2XX	UAHA810000
41	Controller with interface configured for UA250HD2XX	UAHB510000
41	Controller with interface configured for UA350HD2XX	UAHC510000
41	Controller with interface configured for UA500HD2XX	UAHE010000
41	Controller with interface configured for UA072HD1XX	UAH7210000
41	Controller with interface configured for UA144HD1XX	UAHA410000
41	Controller with interface configured for UA216HD1XX	UAHB110000
41	Controller with interface configured for UA300HD1XX	UAHC010000
41	Controller with interface configured for UA420HD1XX	UAHD210000
41	Controller with interface configured for UA600HD1XX	UAHF010000
41	Controller with interface configured for UA060SLXXX	UAS6000000
41	Controller with interface configured for UA120SLXXX	UASA200000
41	Controller with interface configured for UA180SLXXX	UASA800000
41	Controller with interface configured for UA250SLXXX	UASB500000
41	Controller with interface configured for UA350SLXXX	UASC500000
41	Controller with interface configured for UA500SLXXX	UASE000000

Tab. 1.f

*: to be configured by the user with the configuration software: HUMISET000

Accessories

ref.	description	code	notes
	Remote control – English version	TELUA0E000	
	Remote control – Italian version	TELUA0I000	
	humiVisor. Remote terminal with graphic display.	URT0000000	

Tab. 1.g

1.5.4 Service spare parts

ref.	description	code	notes
93	Water filter kit: one 1µ filter + one 5µ filter	UAKFW00000	
94	Bottle of oil for the INTERPUMP pump, SAE 20+30	5024646AXX	for versions: UAXXXHD1X0; UAXXXSLXX0
95	Liquid Teflon for high pressure water fittings, 100ml.	5024612AXX	
96	Inlet / outlet valve kit, brass	1309611AXX	for versions: UAXXXHDXX0; UAXXXSLXX0.
97	Inlet / outlet valve kit, stainless steel	1309612AXX	for versions: UAXXXHDXX1; UAXXXSLXX1.
98	Gasket kit for pump with dia. 15 piston, brass	1309613AXX	for versions: UA06Q/18Q/250HDXX0; UA06Q/18Q/250SLXX0
99	Gasket kit for pump with dia. 18 piston, brass	1309614AXX	for versions: UA12Q/35Q/500HDXX0; UA12Q/35Q/500SLXX0
100	Gasket kit for pump with dia. 15 piston, stainless steel	1309615AXX	for versions: UA06Q/18Q/250HDXX0; UA06Q/18Q/250SLXX0
101	Gasket kit for pump with dia. 18 piston, stainless steel	1309616AXX	for versions: UA12Q/35Q/500HDXX1; UA12Q/35Q/500SLXX1

Tab. 1.h

2. REPLACING THE COMPONENTS IN THE CABINET

2.1 Replacing the components in the pump inlet line



Important:

- use liquid Teflon guaranteed for water pressure up to 100 bar, to seal the water connections;
- wait 3 hours for the Teflon to set.

2.1.1 Water cartridges

1. Switch humiFog off;
2. Close the external water supply;
3. Access the water circuit;
4. Drain the filters: open the valves on the bottom of the filter, press the locking plugs at the top to completely drain the filters.
5. Open the filters: release the nut using the tool for opening the filter, supplied;
6. Replace the cartridges. (see Fig. ???): important: do not reverse them!
 - 5µm cartridge on the right;
 - 1µm cartridge on the left;
7. Close the filters
8. Fill the filters with water:
 - close the valves on the bottom of the filter;
 - open the water supply valve (external);
 - press the black plug located on the top of the 5 µm filter to the right, until water is released around the plug;
 - press the black plug located on the top of the 1 µm filter to the left, until water is released around the plug;
 - dry the water that has been released.
9. Close the water circuit;
10. Switch humiFog on;
11. The cartridges are made from polypropylene: these must be disposed of in compliance with local standards/laws.

2.1 Pump inlet line

1. Switch humiFog off;
2. Close the external water supply;
3. Access the water circuit;
4. Drain the filters (see point 4, Fig. 2.a);
5. Disconnect the water inlet pipe;
6. Disconnect the pipe between the inlet valve and the pump;
7. Remove the pump inlet line: remove the screws and the inlet line from the cabinet;
8. Remove the damaged components and replace them, seal the connections using liquid Teflon;
9. Fit the pump inlet line;
10. Connect the pipe from the inlet valve to the pump;
11. Connect the water inlet pipe;
12. Open the external water valve;
13. Fill the filters with water (see point 8, Fig. 2.a);
14. Close the water circuit;
15. Switch humiFog on.

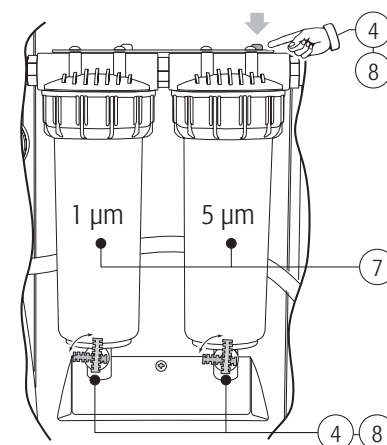


Fig. 2.a

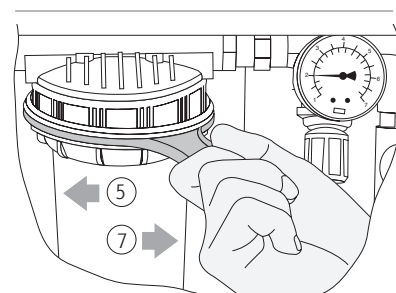


Fig. 2.b

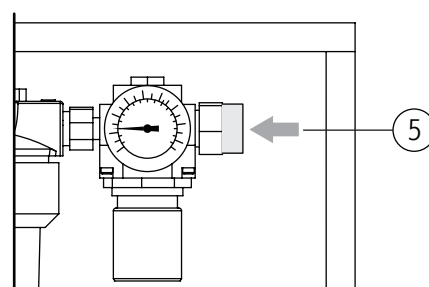


Fig. 2.c

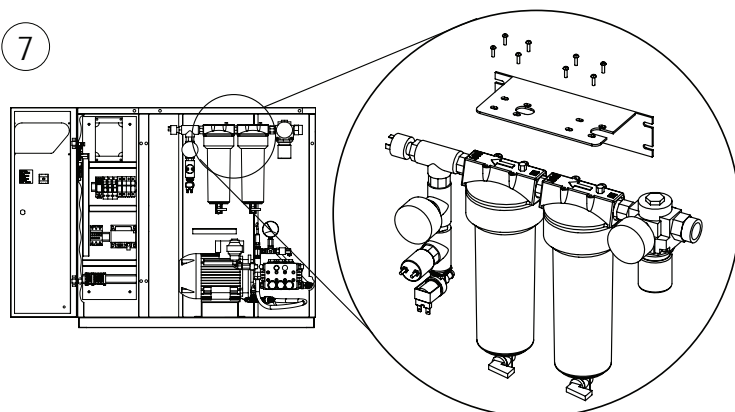


Fig. 2.d

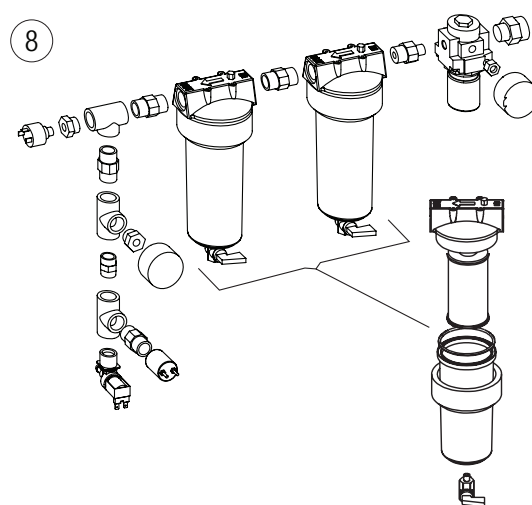


Fig. 2.e

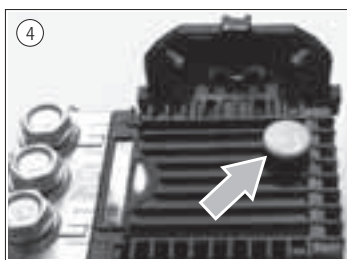


Fig. 2.f

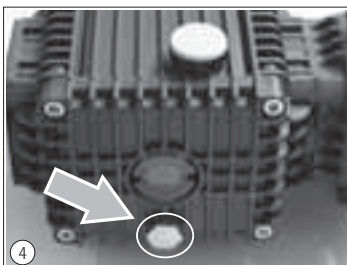


Fig. 2.g

2.2 Replacing the motor and pump components

2.2.1 Changing the oil in the pump

1. Switch humiFog off
2. Close the external water supply
3. Access the water circuit
4. Remove the top and bottom plugs
5. Change the oil:
 - Drain the oil and close the bottom oil plug
 - Dispose of the oil according to local legislation
 - Fill with (ISO 68) SAE 20 W - 30 W oil to the level shown (to fill correctly use 350 ml of oil)
 - Close the top oil plug again
6. Close the water circuit
7. Switch humiFog on

2.2.2 Motor, pump and related components

This chapter provides explanations on how to replace the motor, the pump and all the external components directly relating to these

To replace the parts inside the pump, such as valves and gaskets, please see pump manual.

1. Repeat points from 1 to 6, as described in paragraph 2.2.1
2. Remove the power cable from the motor, noting which terminals the cables are connected to!

Important: from this moment on, water may be released from the pipes

- ➡ 3. Remove the temperature probe
4. Remove the connectors from the pressure probe and the maximum pressure switch
5. Unscrew the pump support from the cabinet
6. Remove the motor and the pump from the cabinet
7. Remove the screws between the pump and the motor and remove the pump
8. Unscrew the motor from the plate

Important: do not lose the plug between the motor and the pump

- ➡ Now the motor can be replaced (continue for the pump)
9. Remove all the required components in the sequence shown
10. Remove the recirculation valve in the sequence shown

Now the pump can be replaced

11. Replace all the components in the reverse order
12. Open the external water supply
13. Fill the filters with water (see point 8, Fig. 2.a)
14. Close the water circuit
15. Switch humiFog on

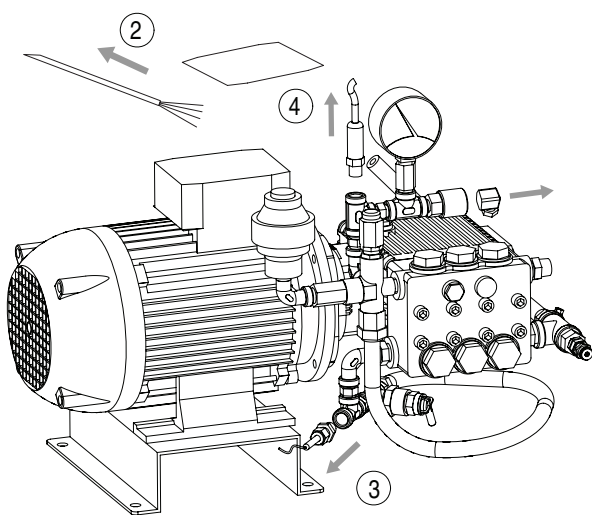


Fig. 2.h

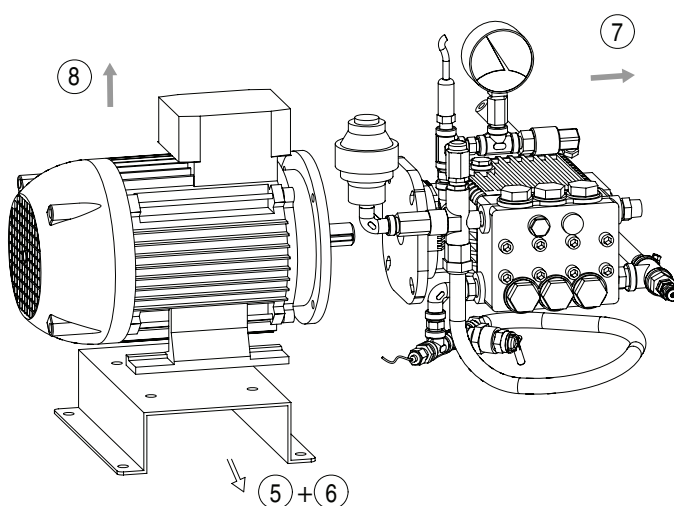


Fig. 2.i

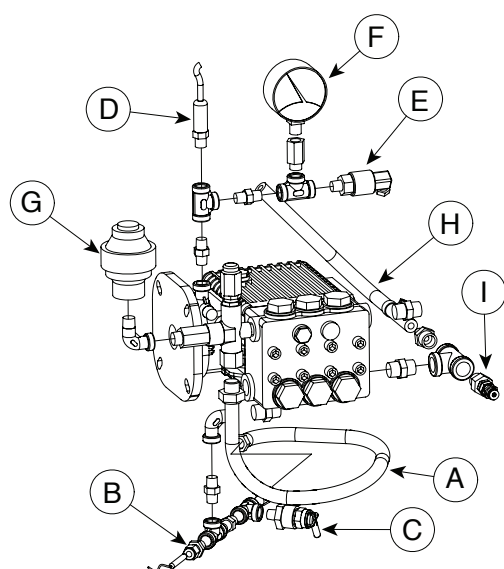


Fig. 2.j

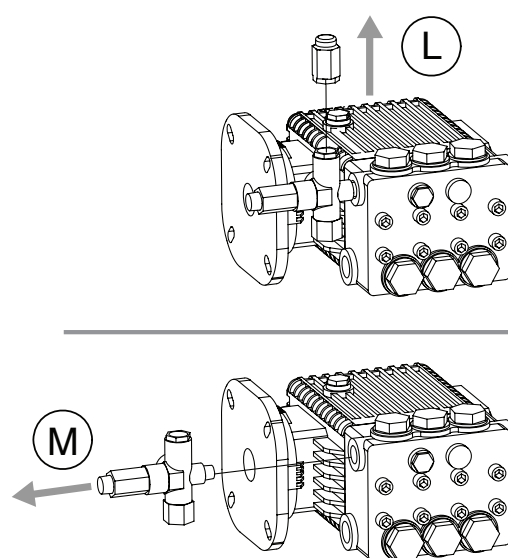


Fig. 2.k

• For versions "HD1X1" and "SLXX1" (with stainless steel pump), see the following figure

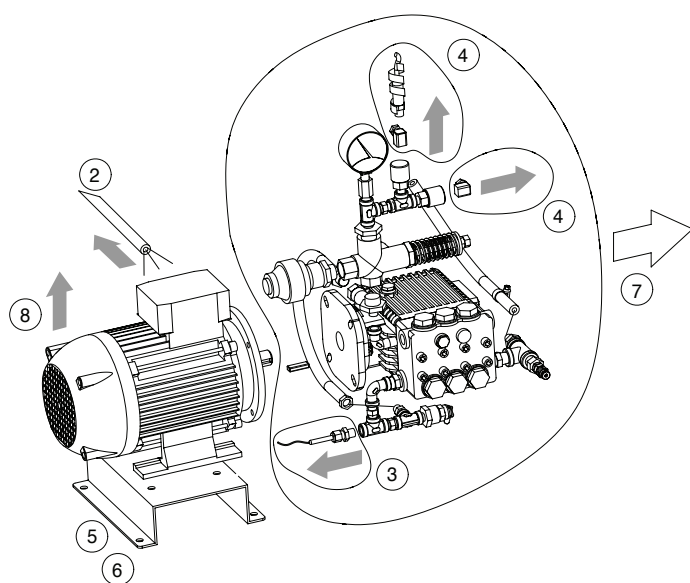


Fig. 2.l

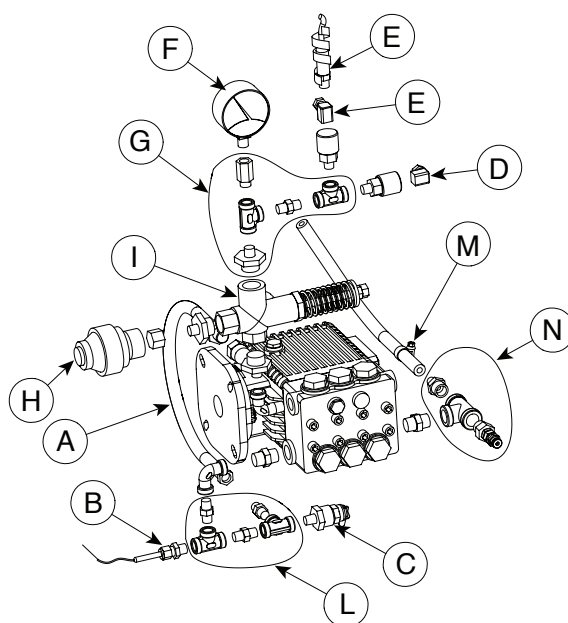


Fig. 2.m

2.3 Replacing the electrical components in the cabinet

1. Switch humiFog off
2. Close the external water supply
3. Open the line disconnecting switch
4. Access the electrical section

Transformer
Fuses and fuse carrier
Relays
Main switch
Fan

5. Replace with extreme care
6. Respect the electrical connections

Version "HD"

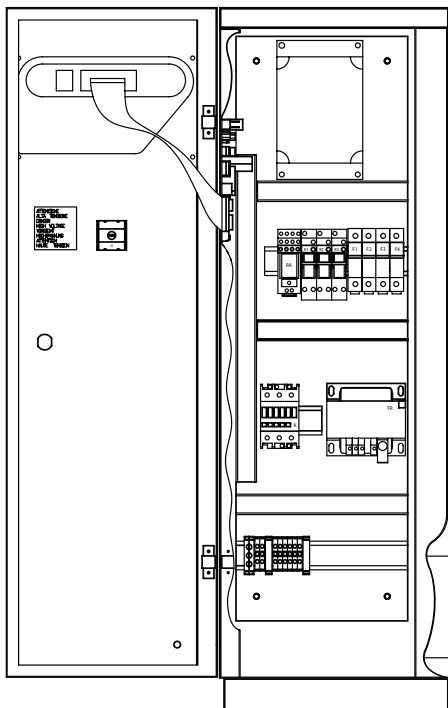


Fig. 2n

Version "HD"

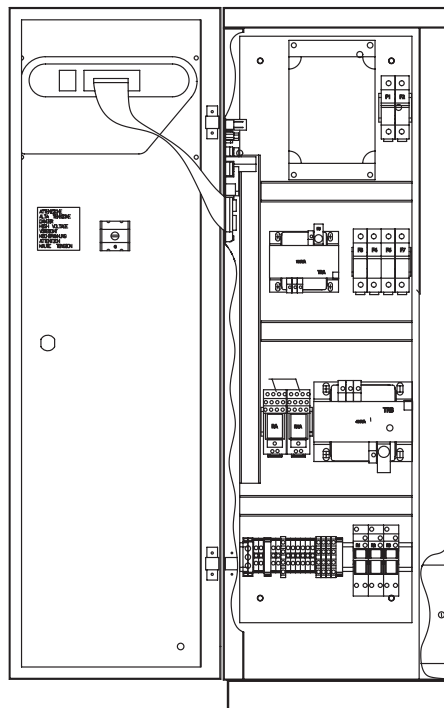


Fig. 2n

Version "SL"

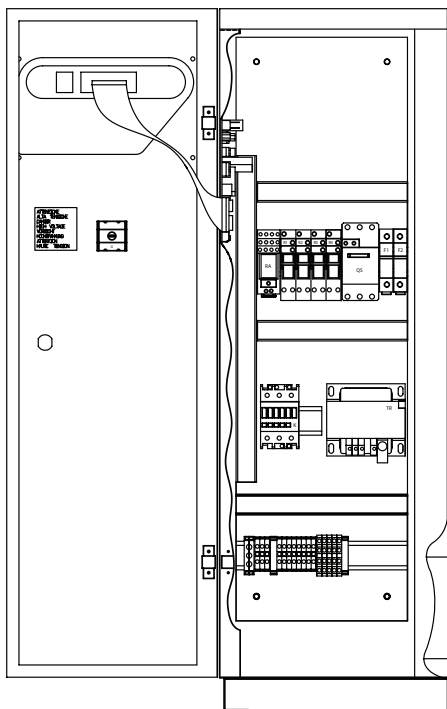


Fig. 2.o

I/O board

- 7 Replace with extreme care
- 8 Observe the correct electrical connections



Fig. 2.p

Controller Flat cable

- 9 Replace with extreme care



Fig. 2.q

Inverter

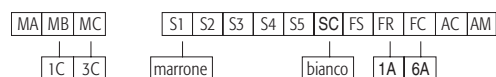
10. Remove the cover on the terminal
11. Disconnect the cables
12. Unscrew the inverter with extreme care
13. Replace with a new inverter



Fig. 2.r

14. Reconnect the cables:

Control terminal block



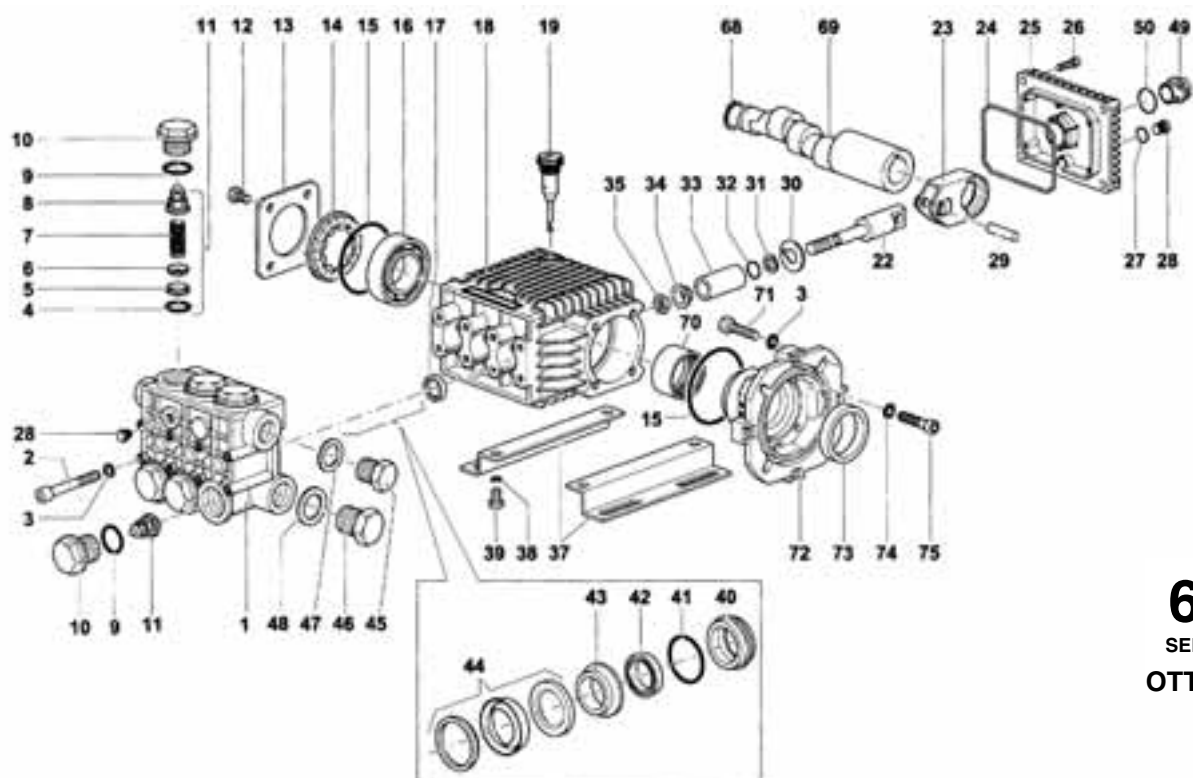
Power terminal block



Fig. 2.s

15. Check the correct earthing of the shield on the control (S1, SC) and power cables (U, V, W, PE)
16. Replace the cover on the terminal
17. Close the electrical section
18. Switch humiFog on

2.4 Chart illustrating the brass pump



63
SERIES
OTTONE

KIT N.	KIT 123	KIT 124	KIT 159
Positions Included Posizioni incluse	4-5-6 7-8 (11)	9-10	17
N.pcs.	6	6	3

PISTON— PISTONE Ø 15			
MODEL- MODELLO: EL 2002 - EL 2007 - EL 2009 EH 1413 - EH 1416 - EH 2009 - EH 2011			
KIT 160	KIT 162	KIT 164	KIT 166
42- 44	40	43	40 - 41 42- 43 44
3	3	3	1

PISTON - PISTONE Ø 18			
MODEL - MODELLO: EL 1411 - EL 1413 - EL 1403			
KIT 161	KIT 163	KIT 165	KIT 167
42- 44	40	43	40 - 41 42 - 43 44
3	3	3	1

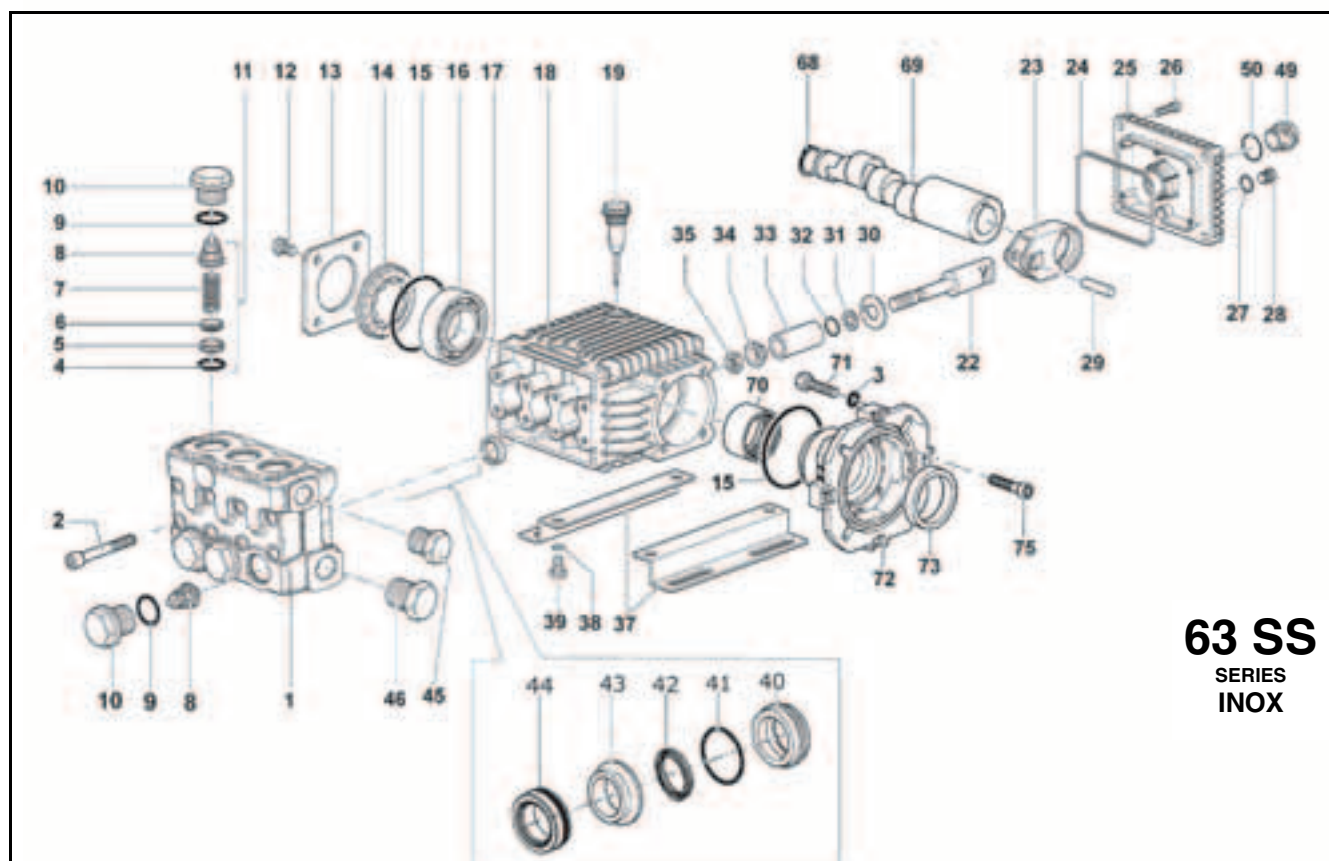
EL 1411—EL 1413
EL 2007—EL 2009
EH 1413—EH 1416
EH 2009—EH 2011
EL 1403—EL 2002

Version / Versione **B**
For electric motors
Per motori elettrici
(50Hz)B14 - MEC 100 – 112

POS.	DESCRIPTION—DESCRIZIONE	N.
1	Testata pompa (pistone Ø 15)	1
2	Testata pompa (pistone Ø 18)	1
3	Vite M 8x65 UNI 5931 - tropicalizzata	8
4	Rosetta Ø 8 Schnorr	12
5	OR Ø 17,13x2,62	KIT 123 6
6	Sede valvola	KIT 123 6
7	Valvola	KIT 123 6
8	Molla Ø 9,4x14,8	KIT 123 6
9	Guida valvola	KIT 123 6
10	OR Ø 20,24x2,62	KIT 124 6
11	Tappo M 24x1,5x17	KIT 124 6
12	Gruppo valvola	KIT 123 6
13	Vite M 6x10 uni 5739 - zincata	4
14	Coperchio carter	1
15	Distanziale con indicatore	1
16	OR Ø 55,56x3,53	2
17	Cuscinetto a sfere 6305	1
18	Anello radiale Ø 18x26x6	KIT 159 3
19	Carter	1
20	Tappo carico olio G 3/8	1
21	Guida pistone	3
22	Biella	3
23	OR Ø 101,27x2,62	1
24	Coperchio posteriore	1
25	Vite M 6x14 UNI 5931 - zincata	4
26	OR Ø 10,82x1,78	1
27	Tappo G 1/4 x9	2
28	Spinotto Ø 9x27,5	3
29	Rosetta Ø 9x25x0,5	3
30	Anello per OR	3
31	OR 5,28x1,78	3
32	Pistone Ø 15	3
33	Pistone Ø 18	3

POS.	DESCRIPTION—DESCRIZIONE	N.
34	Rosetta Ø 8 con collare	3
35	Dado M 8 - INOX	3
37	Piedino - Optional	2
38	Rosetta Ø 8 UNI1751 - Optional	4
39	Vite M 8x16 UNI 5739 zincata - Optional	4
40	Anello di fondo Ø 15	KIT 162-166 3
41	Anello di fondo Ø 18	KIT 163-167 3
42	OR Ø 28,3x1,78	KIT 166-167 3
43	Anello di tenuta Ø 15 L.P. seal	KIT 160-166 3
44	Anello di tenuta Ø 18 L.P. seal	KIT 161-167 3
45	Anello intermedio Ø 15	KIT 164-166 3
46	Anello intermedio Ø 18	KIT 165-167 3
47	Anello di tenuta Ø 15 H.P. seal	KIT 160-166 3
48	Anello di tenuta Ø 18 H.P. seal	KIT 161-167 3
49	Tappo G 3/8x13	1
50	Tappo G 1/2x10	1
51	Rosetta Ø 17,5x23x1,5	1
52	Rosetta Ø 21,5x27x1,5	1
53	Spia livello olio	1
54	OR Ø 26,58x3,53	1
55	Anello di fermo albero	1
56	Albero EL1403 - EL2002	1
57	Albero EH2009	1
58	Albero EH2011	1
59	Albero EL2007- EL1411- EH1413	1
60	Albero EL2009 - EL1413 - EH1416	1
61	Boccola a rullini	1
62	Vite M 8x25 UNI 5739 - zincata	4
63	Flangia per motore elettrico	1
64	Anello radiale Ø 45x62x8	1
65	Rosetta Ø 6 Schnorr	4
66	Vite M 6x30 UNI 5931- zincata	4

2.5 Chart illustrating the stainless steel pump



63 SS
SERIES
INOX

KIT N.	KIT 192	KIT 159
Positions Included Posizioni include	4-5-6 7-8 (11)	17
N.pcs.	6	3

PISTON—PISTONE Ø 15	
MODEL - MODELLO: SSE 1502 - SSE 1505 SSE 1507 - SSE 1509	
KIT 215	KIT 214
40 - 41 - 42 43 - 44	42 - 44
1	3

PISTON - PISTONE Ø 18	
MODEL - MODELLO: SSE 1403 - SSE 1411 SSE 1413	
KIT 216	KIT 204
40 - 41 - 42 43 - 44	42 - 44
1	3

Version / Versione **B**
For electric motors
Per motori elettrici
(50Hz)B14 - MEC 100 - 112

**SSE 1403 - SSE 1411
SSE 1413
SSE 1502 - SSE 1505
SSE 1507 - SSE 1509**

POS.	DESCRIPTION—DESCRIZIONE	N.
1	Testata pompa (pistone Ø 15) - INOX	1
2	Testata pompa (pistone Ø 18) - INOX	1
3	Vite M 8x65 UNI 5931- INOX	8
4	Rosetta Ø 8 Schnorr	4
5	OR Ø 17,13x2,62	KIT 192 6
6	Sede valvola - SS	KIT 192 6
7	Valvola	KIT 192 6
8	Molla Ø 9,4x14,8 - SS	KIT 192 6
9	Guida valvola	KIT 192 6
10	OR Ø 20,24x2,62	6
11	Tappo M 24x1,5x17	6
12	Gruppo valvola - SS	KIT 192 6
13	Vite M 6x10 UNI 5739 - INOX	4
14	Coperchio laterale carter - INOX	1
15	Distanziale con indicatore	1
16	OR Ø 55,56x3,53	2
17	Cuscinetto a sfere 6305	1
18	Anello radiale Ø 18x26x6	KIT 159 3
19	Carter	1
20	Tappo carico olio G 3/8	1
21	Guida pistone - SS	3
22	Biella	3
23	OR Ø 101,27x2,62	1
24	Coperchio posteriore	1
25	Vite M 6x14 UNI 5931- INOX	4
26	OR Ø 10,82x1,78	1
27	Tappo G 1/4x9 - INOX	1
28	Spinotto Ø 9x27,5	3
29	Rosetta Ø 9x25x0,5 - INOX	3
30	Anello per OR	3
31	OR 5,28x1,78	3
32	Pistone Ø 15	3
33	Pistone Ø 18	3

POS.	DESCRIPTION—DESCRIZIONE	N.
34	Rosetta Ø 8 con collare - INOX	3
35	Dado M 8 - SS	3
37	Piedino - Optional	2
38	Rosetta Ø 8 UNI1751 - Optional	4
39	Vite M 8x16 UNI 5739 zincata - Optional	4
40	Anello di fondo Ø 15 - INOX	KIT 215 3
41	Anello di fondo Ø 18 - INOX	KIT 216 3
42	OR Ø 28,3x1,78	KIT 215 - 216 3
43	Anello di tenuta Ø 15 L.P. seal	KIT 214 - 215 3
44	Anello di tenuta Ø 18 L.P. seal	KIT 204 - 216 3
45	Anello intermedio Ø 15 - INOX	KIT 215 3
46	Anello intermedio Ø 18 - INOX	KIT 216 3
47	Anello di tenuta Ø 15 H.P. seal	KIT 214 - 215 3
48	Anello di tenuta Ø 18 H.P. seal	KIT 204 - 216 3
49	Tappo G 3/8x13 - INOX	1
50	Tappo G 1/2x10 - INOX	1
51	Spia livello olio	1
52	OR Ø 26,58x3,53	1
53	Anello di fermo albero	1
54	Albero SSE 1502 - SSE1403	1
55	Albero SSE 1505	1
56	Albero SSE 1411 - SSE1507	1
57	Albero SSE 1413 - SSE 1509	1
58	Boccola a rullini	1
59	Vite M 8x25 UNI 5739 zincata	4
60	Flangia per motore elettrico	1
61	Anello radiale Ø 45x62x8	1
62	Vite M 6x30 UNI 5931 - INOX	4

3. SPARE PARTS FOR THE RACK

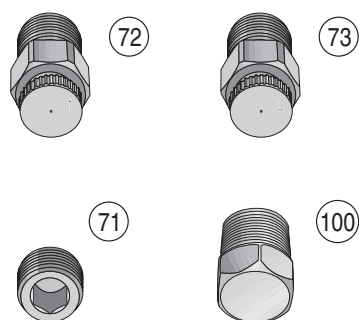


Fig. 3.b

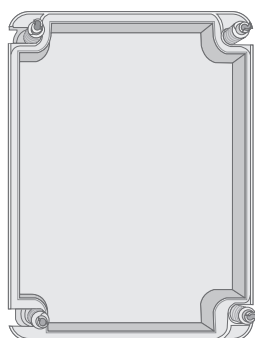
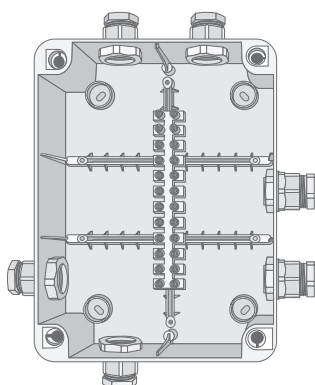


Fig. 3.c

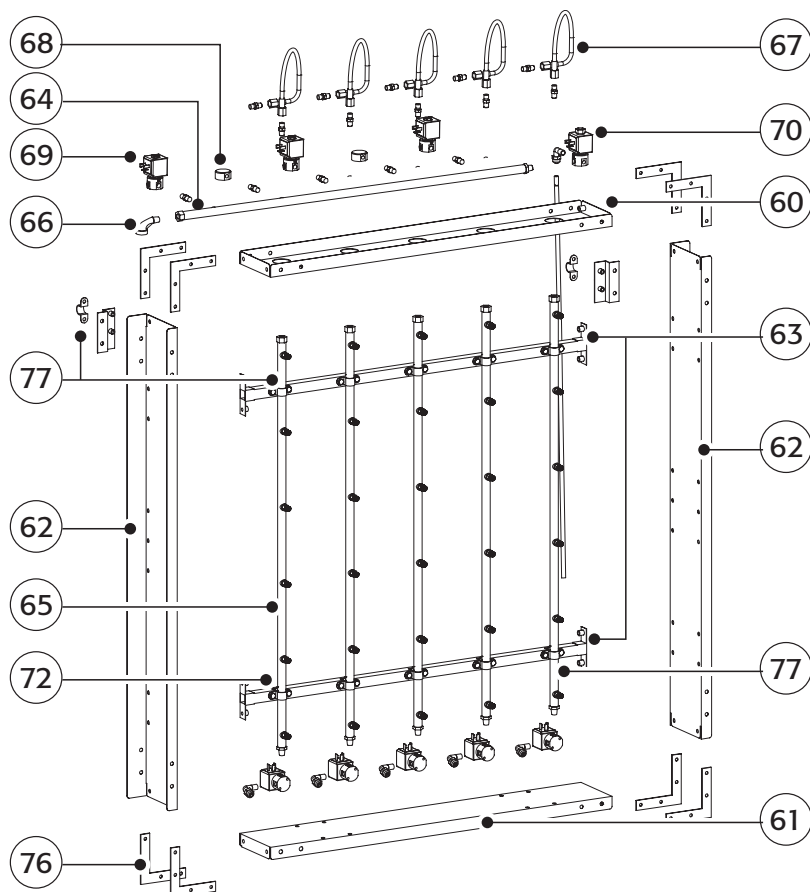


Fig. 3.a

3.1 List of parts in the duct distribution system

ref.	description	code	notes
60	frame top side	14C585A1**	** = 00 to 15 depending on the length
61	frame bottom side	14C470A1**	** = 00 to 15 depending on the length
62	side shoulder	14C585A1**	** = 20 to 35 depending on the length
63	vertical manifold support bar	14C470A1**	** = 40 to 55 depending on the length
64	horizontal manifold	14C585A1**	** = 80 to 95 depending on the length
65	vertical manifold	14C585A1**	** = 60 to 75 depending on the length
66	M/F G1/4" elbow connector	1309610AXX	
67	G1/8" hose	14C531A097	
68	90 degree water connector	14C470A096	
69	stainless steel solenoid valve, 24 V 50 HZ NC	1312079AXX	
70	stainless steel solenoid valve, 24 V 50 Hz NO	1312155AXX	
71	kit of washers and M6 bolts for complete rack assembly	UAKVITIM60	
72	kit of 15 M3 screws for adjusting manifold angle	UAKVITIM30	
73	M G1/8" plug	1309633AXX	
74	atomising nozzle MTP1 2.8 kg/h marked "1"	UAKMTP1000	
75	atomising nozzle MTP2 4.0 kg/h marked "2"	UAKMTP2000	
76	kit of 8 brackets	UAKS000000	
77	kit for vertical manifold assembly with screws and washers	UAKMOR0000	
78	M 1/8" NPT plug	1309639AXX	
79	atomising nozzle MTP1 1.5 kg/h ??? marked "???"		
80	junction box		

Tab. 3.a

4. REPLACING AND CLEANING THE COMPONENTS IN THE RACK

Important:

- use liquid Teflon guaranteed for water pressure up to 100 bar, to seal the water connections;
- wait 3 hours for the Teflon to set.

4.1 Water leaks

1. Repair all the connections without o-rings or rubber washers using liquid Teflon;
2. If necessary, replace the components as described in the following paragraph.

4.2 Cleaning

1. remove the components to be cleaned;
2. remove any components not made from stainless steel (for example nozzle o-rings);
3. soak the stainless steel parts in a solution of water and vinegar for 12 hours (use 4/5 water and 1/5 vinegar);
4. rinse with water;
5. for particularly resistant scale use pure vinegar for 12 hours;
6. replace the components in the reverse order.

4.3 Replacement

1. Switch humiFog off;
2. Close the external water supply valve;
3. Remove the connectors from the solenoid valve.

Nozzles and plugs

Important: remember the positions of the nozzles/ plugs

4. Replace with extreme care.

Vertical manifolds

Important:

- remember the angle of each manifold;
- make sure the NO valve and direct connection remain intact;

5. Remove the hose;
6. Remove the coil from the NO solenoid valve;
7. Remove the screw marked "PH0";
8. Remove the bolts marked "D";
9. Remove the adapter "E" for connecting the hose;
10. Unscrew the NO solenoid valve.

4

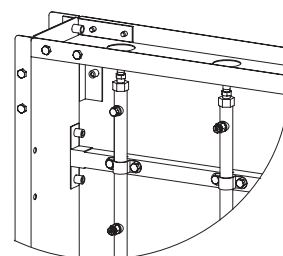
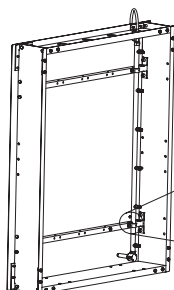


Fig. 4.b

5



...

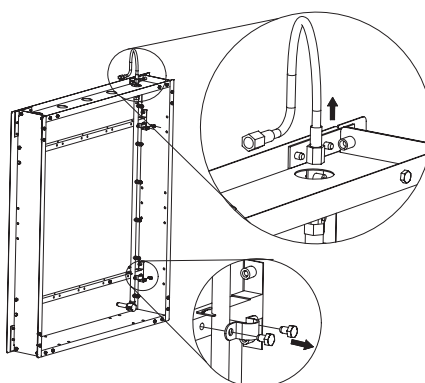
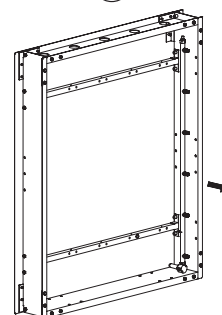


Fig. 4.c

10



11 - 15

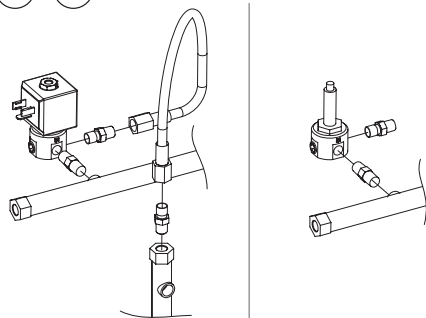


Fig. 4.d

16 - 17

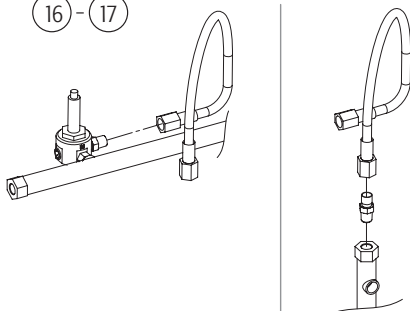


Fig. 4.e

18 - 23

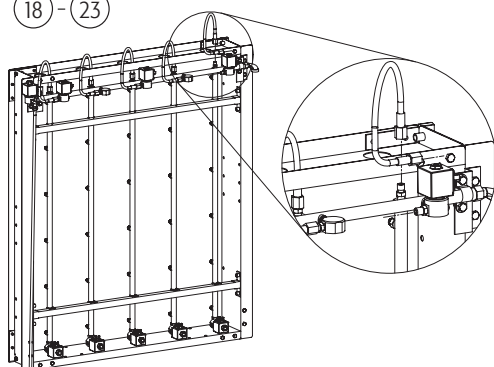


Fig. 4.f

NC valves and direct connections

11. Solenoid valve: remove the coil;
12. Unscrew part "H";
13. Unscrew the NC solenoid valve/direct connectors with the G1/8" nipple;
14. Unscrew the G1/8" nipple from the valve body/direct connector;
15. Unscrew the adapter for hose "E";

Hose

16. Unscrew the parts marked "H";
17. Install the new hose.

Horizontal manifold

18. Solenoid valve: remove the coil;
19. Unscrew all the parts marked "H";
20. Remove the bolts marked "D";
21. Unscrew the NC solenoid valve/direct connectors, with the G1/8" nipple
22. Remove the 90 degree elbow connector for draining the NO solenoid valve
23. Unscrew the M/F G1/4" elbow

5. SPARE PARTS FOR THE ROOM DISTRIBUTION SYSTEM

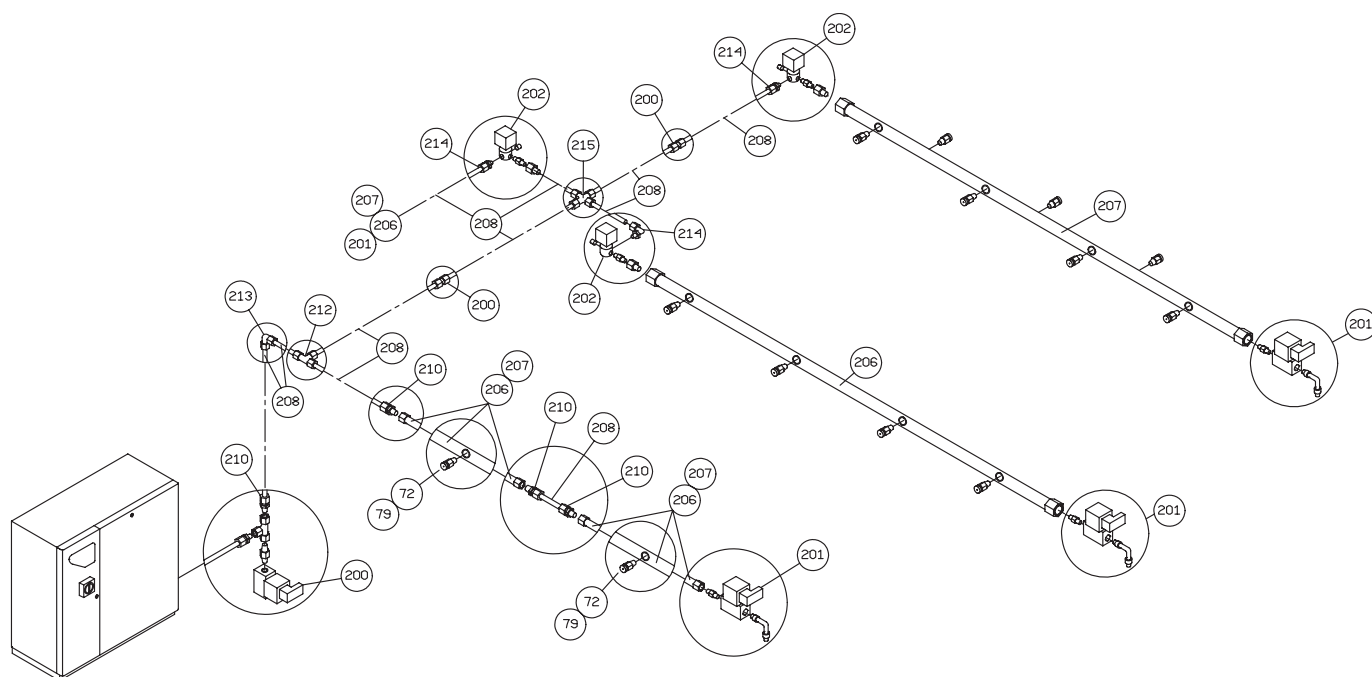


Fig. 5.a

5.1 List of spare parts for the room distribution system

ref.	description	code	notes
73	M G1/8" plug	1309633AXX	
74	Atomising nozzle MTP1 2.7 l/h	UAKMTP1000	
78	M 1/8" NPT plug	1309639AXX	
79	Atomising nozzle MTP0 1.45 l/h	UAKMTP0000	
200	Central drain solenoid valve kit	UAKCD00000	
201	Drain solenoid valve kit for manifold	UAKVAL0000	
202	Capacity-control solenoid valve kit	UAKVALNC00	
206	Manifold with 4 holes for nozzles, step 600	UAKC4FP600	4 holes on one side
207	Manifold with 7 holes for nozzles, step 300	UAKC7FP300	4+3 holes on two sides

Tab. 5.a

Long hose kit (L= 2 m + 1.5 m + 2 m), (A= 4 holes, B= 7 holes)

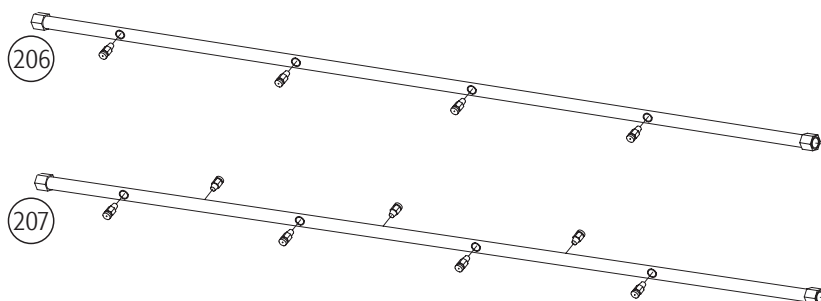


Fig. 5.b

6. REPLACING AND CLEANING THE DISTRIBUTION SYSTEM COMPONENTS

Before performing the following operations, make sure humiFog is off and the supply water valve is closed. Water may be released when disconnecting the various components in the water circuit.

6.1 Water leaks

- Repair all the connections without o-rings or rubber washers using liquid Teflon
- If necessary, replace the components as described in paragraph 5.4.2.

6.2 Cleaning

- Remove the components to be cleaned;
- Remove any components not made from stainless steel (for example, nozzle o-rings);
- Soak the stainless steel parts in a solution of water and vinegar for 12 hours (use 4/5 water and 1/5 vinegar);
- Rinse with water;
- For particularly resistant scale use pure vinegar for 12 hours;
- Replace the components in the reverse order.

6.3 Replacement

- Switch humiFog off;
- Close the external water supply valve.

6.3.1 Replacing the nozzles and plugs

Important: remember the positions of the nozzles (A) and the plugs (B).



Replace with extreme care.

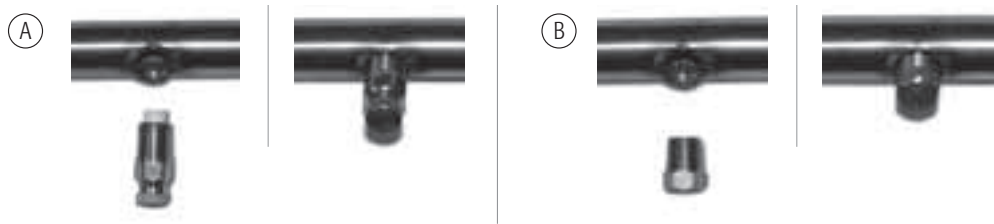


Fig. 6.a

6.3.2 Replacing the NC on-off valves



Important: the on-off valves are "normally closed" solenoid valves; the valve body has three F G1/8" connections (see the figure on the side).

Remember that the water inlet is the hole in the centre, while the two side holes are the two outlets available:

- individually, closing the outlet that is not used with a M G1/8" plug;
- together if this simplifies the water connections.

- Remove the electrical connector;
- Disconnect the pressurised water supply pipe;
- Unscrew the valve from the fittings;
- Unscrew the valve inlet connection;
- Unscrew the plug from the valve water outlet that is not used.

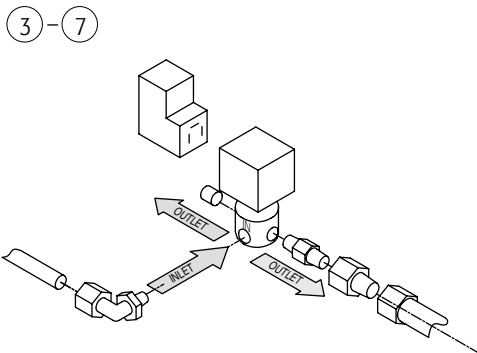


Fig. 6.b

6.3.3 Replacing the NO drain valves at the end of the line

8. Remove the electrical connector;
9. Disconnect the water drain pipe;
10. Unscrew the drain pipe connection from the valve;
11. Unscrew the valve and the nipple from the distribution manifold.

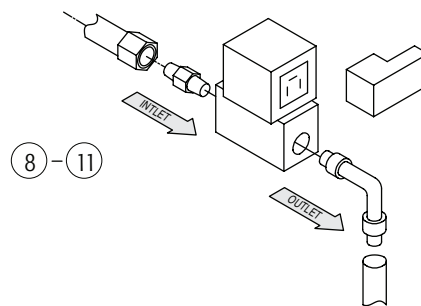


Fig. 6.c

6.3.4 Replacing the NO drain valves between the pump and the distribution system

12. Remove the electrical connector;
13. Disconnect the water drain pipe;
14. Unscrew the drain pipe connection from the valve;
15. Unscrew the valve and the nipple from the "T".

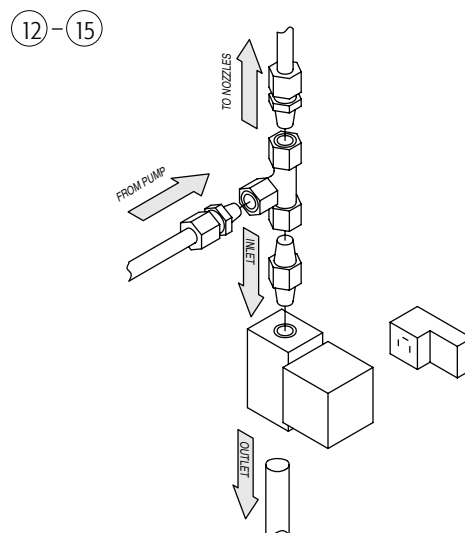


Fig. 6.d

7. SPARE PARTS BETWEEN HUMIFOG AND THE DISTRIBUTION SYSTEM

7.1 Spare parts for connection between humiFog and the distribution system

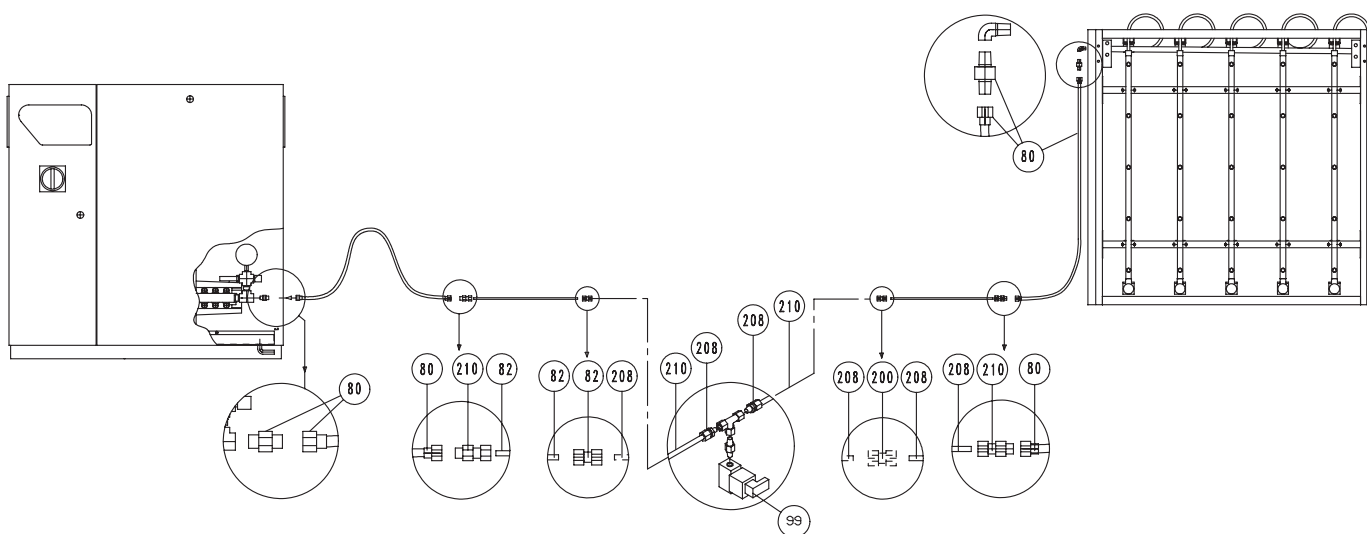


Fig. 7.a

Short hose kit (L= 2m)



Fig. 7b

Kit of 2 short hoses (L= 2m) + Extension pipe kit (L= 1.5 m)

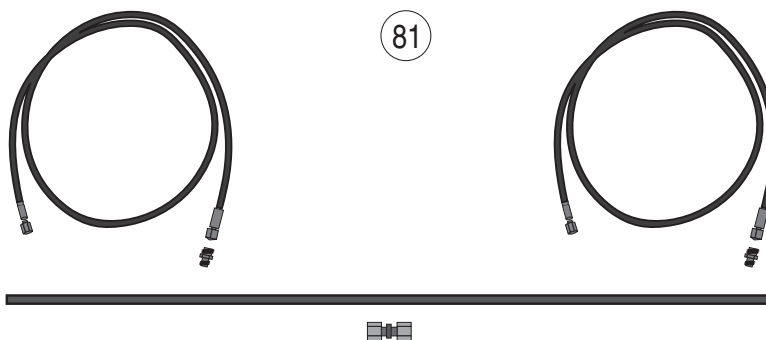


Fig. 7e

Extension hose kit (L= 2m)



Fig. 7.d

Extension pipe kit (L= 1.5 m)

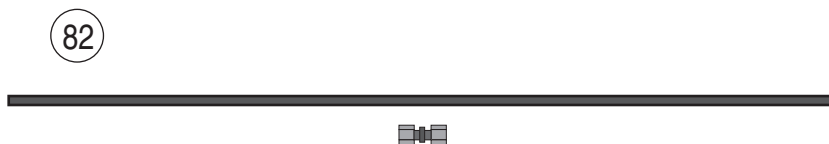


Fig. 7e

7.2 Spare parts list for connection between humiFog and the distribution system and accessories

3.2.2 Spare parts list - accessories

Ref.	Description	Code	Notes
80	Short connection kit L= 2 m Hose and adapter	UAKT100000	
81	Long connection kit L= 5.5 m Two hoses, one steel pipe and adapters	UAKT200000	
82	Extension pipe kit L= 1.5 m One stainless steel pipe and adapter	UAKT300000	
83	Extension hose kit L= 2 m	UAKT400000	
	Extension kit L= 0.5 m	UAKT500000	
	Extension kit L= 1 m	UAKT600000	
	Extension kit L= 5 m	UAKT700000	
	Extension kit L= 10 m	UAKT800000	
	Extension kit L= 20 m	UAKT900000	
208	Extension pipe kit dia. 10 L= 3 m One stainless steel pipe	UAKT030000	
208	Extension pipe kit dia. 10 L= 6 m Two stainless steel pipes	UAKT060000	
208	Extension pipe kit dia. 10 L= 12 mFour stainless steel pipes	UAKT012000	
208	Extension pipe kit dia. 10 L= 18 mSix stainless steel pipes	UAKT018000	
209	Straight terminal for dia. 10 pipe	UAKTD00000	
210	Straight M G 1/4" terminal for dia. 10 pipe	UAKTD14000	
211	Straight M G 1/8" terminal for dia. 10 pipe	UAKTD18000	
212	Female "T" for dia. 10 pipe	UAKTT00000	
213	Female elbow for dia. 10 pipe	UAKTG00000	
214	Female 1/8" elbow for dia. 10 pipe	UAKTG18000	
215	Female "X" for dia. 10 pipe	UAKTX00000	

Tab. 3.b